2007 WILLOW FLYCATCHER SURVEYS AT

ORILLA VERDE, RIO TRUCHAS, AND SANTA FE RIVER, NEW MEXICO

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EXECUTIVE SUMMARY

The Southwestern Willow Flycatcher (*Empidonax traillii extimus*) is a federally endangered migrant songbird breeding locally in riparian areas of New Mexico. The Bureau of Land Management (BLM), Taos Field Office, manages several riparian sites in northern New Mexico containing potential Southwestern Willow Flycatcher habitat. BLM has contracted Hawks Aloft, Inc. to conduct annual Willow Flycatcher surveys at Orilla Verde Recreation Area and Rio Truchas since 1998, and at a Santa Fe River site since 2005. In 2007, we observed six Willow Flycatchers at Orilla Verde and five at Santa Fe River. All of the observations occurred before the third survey period (i.e., before 22 June); therefore, we could not confirm the presence of territorial Southwestern Willow Flycatchers at any of the sites.

Because we have observed Willow Flycatchers in nine of the last ten years at Orilla Verde, including potential territorial birds in 2005, BLM should maintain the presence of dense riparian vegetation at this recreation area. Continued monitoring is needed to better evaluate breeding potential at Orilla Verde and to provide BLM with the most current information possible on patch occupancy by apparent migrants or territorial birds. Because of the consistent lack of observations at Rio Truchas (one Willow Flycatcher observed in the last ten years), BLM could consider a lower priority for surveys at this site if they are compelled to reduce their future scope of work for Willow Flycatcher surveys. After observing no Willow Flycatchers at Santa Fe River in 2006, five observations during the first survey in 2007 restored confidence that is might be an important migration stopover site. We recommend that BLM continue monitoring at Santa Fe River and place a high priority on protecting remaining willow patches.

INTRODUCTION

Riparian corridors provide important habitat for breeding birds in arid regions of the western United States (Knopf and Samson 1994). Although western riparian areas occupy less than one percent of the landscape, many support more breeding bird species than surrounding upland habitats (Knopf et al. 1988, Gates and Giffen 1991, Powell and Steidl 2000). Because riparian areas provide breeding habitat for many bird species, it is important to maintain them. It is especially important to maintain riparian areas that host rare or endangered species.

The Southwestern Willow Flycatcher (*Empidonax traillii extimus*) is a federally endangered migrant songbird breeding locally in riparian areas of New Mexico (U.S. Fish and Wildlife Service 1995, Moore and Ahlers 2005). Southwestern Willow Flycatchers inhabit dense riparian vegetation, including both native (e.g., cottonwood, *Populus* spp., and willow, *Salix*, spp.) and exotic (e.g., saltcedar, *Tamarix* spp.) woody plants (Sogge et al. 2003). Habitat for Southwestern Willow Flycatcher is usually in close proximity to water or saturated soils (Sedgwick 2000).

Because of morphological and vocal similarities, it is difficult to distinguish between Southwestern Willow Flycatchers and other subspecies of Willow Flycatcher. Despite this difficulty, the seasonal timing of an observation can help identify the endangered Southwestern subspecies. Multiple subspecies of Willow Flycatcher can be observed in New Mexico during the migration period, but only Southwestern Willow Flycatcher regularly remains in the state to breed (Sogge et al. 1997). Therefore, surveys documenting Willow Flycatchers throughout the breeding season can provide an indication of local Southwestern Willow Flycatcher presence.

The Bureau of Land Management (BLM), Taos Field Office, manages several riparian sites in northern New Mexico with potential Southwestern Willow Flycatcher habitat. BLM contracted Hawks Aloft, Inc. to conduct annual Willow Flycatcher surveys at three of these sites: Orilla Verde and Rio Truchas, starting in 1998, and Santa Fe River, starting in 2005. We have previously documented Willow Flycatchers at all sites, most frequently at Orilla Verde, where observations in 2005 might have included territorial Southwestern Willow Flycatchers. Continued surveys are needed at Orilla Verde to better understand the breeding potential of Southwestern Willow Flycatchers at this site, and to identify any potential conflicts with local habitat restoration or recreation activities. At Rio Truchas and Santa Fe River, we have observed a small number of probable migrant Willow Flycatchers, indicating that these sites could host birds in some years. Continued surveys at Rio Truchas and Santa Fe River help update current Willow Flycatcher status and identify any potential management concerns. In this report, we provide locations of all Willow Flycatcher observations at Orilla Verde, Rio Truchas, and Santa Fe River in 2007. We indicate any Southwestern Willow Flycatcher presence based on the seasonal timing of observations.

STUDY AREA

We conducted Willow Flycatcher surveys at three riparian sites on BLM land within the Taos Resource Area: Orilla Verde, Rio Truchas, and Santa Fe River (Fig. 1). We conduct additional annual breeding bird point count surveys at each site. The Santa Fe River Willow Flycatcher survey site is the same as the La Cienega breeding bird site. We briefly summarize habitat and conditions for each site below.

Orilla Verde

We conducted Willow Flycatcher surveys along approximately 7.0 km of the Rio Grande at the Orilla Verde Recreation Area, in Taos County, New Mexico (Fig. 2). Orilla Verde lies within a steep-walled canyon that receives a substantial amount of recreation (e.g., boating, fishing, camping) activity. Vegetation along the canyon slopes consisted of sage (*Artemisia* spp.), pinyon pine (*Pinus edulis*), juniper (*Juniperus* spp.), and grasses. Dominant riparian vegetation included dense patches of saltcedar and stands of willow and New Mexico olive (*Foresteria neomexicana*). Riparian vegetation also included Fremont cottonwood (*Populus fremontii*). Several patches of willow and saltcedar have been identified as potential Southwestern Willow Flycatcher habitat, based on their size (5–60 m^2), vegetation height (3-7 m), and previous flycatcher observations.

Rio Truchas

We surveyed approximately 2.5 km along the Rio de Truchas in eastern Rio Arriba County, New Mexico (Fig. 3). Scattered patches of cottonwood, willow, and alder characterized the riparian strip along Rio Truchas. Dense patches of willow occurred near the northwestern end of the survey area, and this area has been identified as potential Willow Flycatcher habitat. Cattle exclosures were constructed around sections of Rio Truchas in 1998. Although cattle have been observed within the exclosures during some years, we have not observed cattle during surveys at Rio Truchas since 2002. Spring snowmelt results in relatively high water flow early in the season at Rio Truchas; water flow usually decreases markedly as the season progresses. High water flow limited access to the site early in 2005, but water flow has not affected our survey efforts since.

Santa Fe River

We surveyed approximately 1.5 km of the Santa Fe River in Santa Fe County, near La Cienega, New Mexico (Fig. 4). The survey area began near the Santa Fe Horse Park entrance along Highway 56. We surveyed south and west along the Santa Fe River, until the river reached the BLM property boundary just south of the highway crossing. Riparian vegetation consisted of several dense patches of native and exotic plants. One of those dense patches, near the highway crossing, was substantially thinned prior to the 2007 survey season. Water level in the Santa Fe River is variable; we noted relatively high flow in 2005, characterized by localized bank flooding, and relatively dry conditions in 2007, when water was contained within the river channel.

Vegetation was thinned in this portion of the channel at the Santa Fe River site.

METHODS

Southwestern Willow Flycatcher surveys followed the standardized protocol developed by Sogge et al. (1997). All lead observers were trained to follow this protocol and certified to conduct Willow Flycatcher surveys under Hawks Aloft's Federal Fish and Wildlife Permit (TE835139-1). Each site had a different lead observer. At Orilla Verde, we employed the same observer that conducted all surveys at the site from 2001 through 2005. At Rio Truchas, we used a lead observer that was new to the project. At Santa Fe River, we used the same observer that conducted all surveys at the site in 2005 and 2006. Technicians periodically assisted lead observers to improve survey coverage, to gain experience, or to help alleviate safety concerns.

We conducted surveys during three survey periods: 15-31 May, 1-21 June, and 22 June-10 July. At Rio Truchas, we conducted one survey per site in each of the three survey periods, as recommended by Sogge et al. (1997). Based on revised protocol by the U.S. Fish and Wildlife Service (2000), prescribing at least five visits for project-related surveys, BLM requested an additional two surveys per site during the third survey period at Orilla Verde and Santa Fe River (a total of five surveys per season). We conducted consecutive surveys at a site at least five days apart, beginning each within a half-hour of sunrise and concluding within four hours. Because Orilla Verde is a relatively large site, we took two mornings to complete each survey there. We completed each survey at the other sites within one morning.

During surveys, observers walked slowly through the site, stopping every 20 to 30 meters, or as necessary to adequately cover habitat patches. At each stop, surveyors listened for flycatcher vocalizations. If none were heard, taped vocalizations of a

Southwestern Willow Flycatcher were played for 15-30 seconds, followed by one or two minutes of observation. We recorded Universal Transverse Mercator (UTM) coordinates (North American Datum 27, Zone 13) for each Willow Flycatcher observed. Because several species appear similar to Willow Flycatchers (e.g., Dusky Flycatcher, *E. oberholseri*), positive identification of a Willow Flycatcher required that the observer hear the distinctive "*fitz-bew*" song (Sogge et al. 1997). To distinguish Southwestern Willow Flycatchers from other subspecies that issue a similar song, we concluded that Willow Flycatchers observed in the third survey period were Southwestern Willow Flycatchers, because other migrant subspecies were not expected during this time (Sogge et al. 1997). Flycatchers observed only during the first two survey periods might also be Southwestern Willow Flycatchers, but the possible presence of the migrating *E. t. adastus* subspecies makes identification uncertain during this time. We report the number and locations of Willow Flycatchers observed at each site and indicate probable Southwestern Willow Flycatchers, based on the seasonal timing of observations. We also present a list of other avian species seen or heard while conducting surveys (Appendix 1) and copies of original data forms (Appendix 2).

RESULTS

We recorded 11 Willow Flycatchers in 2007 (Table 1, next page); all observations occurred at Orilla Verde (N=6) and Santa Fe River (N=5). Because all observations occurred during the first (N=8) or second (N=3) survey periods, we could not confirm the presence of territorial Southwestern Willow Flycatchers at any of the sites. The birds we observed were likely migrant Willow Flycatchers, subspecies unknown.

Table 1. Number of Willow Flycatchers detected at Orilla Verde (OV), Rio Truchas (RT), and Santa Fe River (SF), New Mexico from 1998-2007. Period 1 surveys were conducted 15-31 May. Period 2 surveys were conducted 1-21 June. Period 3 surveys were conducted from 22 June-10 July. A dash (-) indicates that surveys were not conducted. A superscript indicates the number of surveys we conducted during the period, if more than one.

		Number of Willow Flycatchers Detected									
		1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
OV	Period 1	1	0	2	0	1	5	7	1	10	3^2
	Period 2	0	1	0	0	0	1	0	4	0^2	3^2
	Period 3	0	0	0	0	0	0	0	2	0^3	0^3
RT	Period 1	0	0	0	0	0	0	0	-	0	0
	Period 2	0	0	1	0	0	0	0	0	0	0
	Period 3	0	0	0	0	0	0	0	0	0	0
SF	Period 1	-	-	-	-	-	-	-	4	0	5
	Period 2	-	-	-	-	-	-	-	2	0	0
	Period 3	-	-	-	-	-	-	-	0^3	0^3	0^3

We recorded six Willow Flycatchers at Orilla Verde during 38:00 (hr:min) of survey time in 2007 (Table 2, next page, Fig. 2). We added an extra survey in each of the first two survey periods to increase our coverage of the migration period. We recorded one or two Willow Flycatchers in each of the four surveys in periods one and two. A Willow Flycatcher was observed as late as 11 June, but no Willow Flycatchers were observed during three subsequent surveys in period three. Therefore, we can not confirm the presence of territorial Southwestern Willow Flycatchers at Orilla Verde in 2007.

For the seventh consecutive year, we observed no Willow Flycatchers at Rio Truchas in 2007. We completed three surveys in 9:15 (hr:min) of survey time. The only Willow Flycatcher observation we have recorded at Rio Truchas in ten years of surveys since 1998 occurred on 7 June 2000.

Table 2. Willow Flycatcher locations at Orilla Verde Recreation Area and Santa Fe River, New Mexico in 2007. Each row represents one Willow Flycatcher. No Willow Flycatchers were found at Rio Truchas in 2007. All Universal Transverse Mercator coordinates were recorded in North American Datum 27.

Site	Date	Easting	Northing
Orilla Verde	22 May 2007	429687	4016234
Orilla Verde	22 May 2007	433620	4021035
Orilla Verde	31 May 2007	433008	4020593
Orilla Verde	04 June 2007	431318	4018434
Orilla Verde	05 June 2007	432832	4020241
Orilla Verde	11 June 2007	431116	4018053
Santa Fe River	22 May 2007	398774	3940709
Santa Fe River	22 May 2007	398676	3940470
Santa Fe River	22 May 2007	398650	3940429
Santa Fe River	22 May 2007	398268	3940139
Santa Fe River	22 May 2007	398217	3940076

We recorded five Willow Flycatchers at Santa Fe River during 12:44 (hr:min) of survey time (Table 2, Fig. 4). All five Willow Flycatcher observations occurred during the first survey on 22 May. Because no observations occurred during the third survey period, we can not confirm the presence of territorial Southwestern Willow Flycatchers at Santa Fe River in 2007. Our results in 2007 were somewhat similar to 2005, when six Willow Flycatchers were observed during the first two periods and none were observed during the third; no Willow Flycatchers were observed in 2006 (Table 1).

DISCUSSION

Representing three separate counties and river channels in the Bureau of Land Management's Taos Resource Area, the Orilla Verde, Rio Truchas, and Santa Fe River sites each offer different habitat quality and conditions for Willow Flycatchers.

Therefore, each site has a different potential for hosting migrant Willow Flycatchers or territorial Southwestern Willow Flycatchers. Based on ten years of surveys from 1998-2007, we offer the following site-specific conclusions and recommendations.

Orilla Verde

Orilla Verde consistently hosts Willow Flycatchers, at least during migration, and Southwestern Willow Flycatchers might nest at the site in some years. Most observations at Orilla Verde during the last ten years have been apparent migrant Willow Flycatchers; however, occasional observations in June, particularly two detections during the third survey period in 2005, indicate a reasonable potential for Orilla Verde to host breeding Southwestern Willow Flycatchers in the future. Because of substantial recreation use and riparian restoration opportunities at Orilla Verde, at least five surveys annually are justified to provide BLM with the most current information possible on patch use and potential management concerns. Maintaining multiple visits at Orilla Verde could help ensure that occupied patches are adequately protected; extra surveys or nest searching efforts could be provisioned for documenting breeding activity in occupied patches.

Regardless of breeding or migrant status, maintaining the structure and density of riparian patches is important for the continued existence of Willow Flycatchers at Orilla Verde. We have observed Willow Flycatchers in patches of either native willow or exotic saltcedar at Orilla Verde. DeLoach et al. (2000) suggested that saltcedar stands might be inferior to willow stands for some songbirds because they provide a relatively lower prey base for insectivores. Despite potential prey limitations in saltcedar, however, Owen et al. (2005) found no evidence that Willow Flycatchers breeding in saltcedar habitats exhibit

poorer nutritional condition. The dense structure of saltcedar provides an abundance of perching or nesting substrates for Willow Flycatchers, thereby enhancing its value, especially in areas where native vegetation is sparse or unavailable. Managers frequently attempt to restore riparian areas by removing saltcedar and planting native vegetation. We support restoration projects that promote the long-term health of riparian areas, but Willow Flycatchers might respond negatively to short-term loss of vegetation structure if previously occupied patches are altered. We encourage BLM to be mindful of current or recently occupied patches, regardless of vegetation type, when considering management projects at Orilla Verde.

Rio Truchas

The annual lack of Willow Flycatcher observations at Rio Truchas is as consistent as the annual presence observed at Orilla Verde. We have recorded a Willow Flycatcher during only one of the last ten years at Rio Truchas. Despite the apparent absence of Willow Flycatchers in most years, Rio Truchas offers valuable habitat for a variety of other riparian species, such as Yellow-breasted Chat (*Icteria virens*) and Blue Grosbeak (*Guiraca caerulea*). We recommend maintaining the three-survey regime at Rio Truchas if possible, but as a lower priority than the Orilla Verde and Santa Fe River surveys. Continued surveys at Rio Truchas might be beneficial for monitoring the current status of Willow Flycatchers. However, if necessary, BLM could discontinue Willow Flycather surveys at Rio Truchas and use the results of our twice-annual breeding bird point count surveys at that site to evaluate the status of Willow Flycatchers and other riparian specialists. If Willow Flycatcher surveys are discontinued at Rio Truchas, we recommend

that BLM reinstitute the surveys before engaging in any management plans that would alter the structure or configuration of habitat patches.

Santa Fe River

In three years of surveys, we offer no conclusive evidence that Southwestern Willow Flycatchers breed at Santa Fe River, but additional surveys are needed to clarify annual and seasonal patterns of use. Our observations of 6, 0, and 5 Willow Flycatchers in 2005, 2006, and 2007, respectively, indicate some unpredictability. Numbers early in the season might depend on the survey dates coinciding with periods of peak migration. In 2007, all of our Willow Flycatcher observations at Santa Fe River occurred on the same date (22 May). Migrant Willow Flycatchers might have also stopped at Santa Fe River in 2006, but on a date we did not survey. Although our lack of observations in nine third-period surveys from 2005 through 2007 is more consistent, our observation of two Willow Flycatchers on 8 June 2005 (i.e., the second survey period) is late enough to consider that birds could remain to breed in some years. Water flow and patch sizes are less than ideal, but perhaps sufficient for nesting. Three years of surveys are not adequate to dismiss the possibility that Southwestern Willow Flycatchers occasionally nest, or could nest in the future, at Santa Fe River.

Because Willow Flycatchers use this site during the migration period, and have some potential for breeding, we urge BLM to protect remaining habitat patches at Santa Fe River. The thinning of willows near the highway crossing prior to our surveys in 2007 was unfortunate from a Southwestern Willow Flycatcher management prospective. We recognize that Southwestern Willow Flycatchers are not the only management concern at

the site, and that BLM might have based their treatments, in part, on our lack of Willow Flycatcher observations throughout 2006 and during the third survey period of 2005. We recommend that BLM place a higher priority on maintaining or enhancing the riparian vegetation at Santa Fe River. First, our observation of five Willow Flycatchers in 2007 restores confidence that this is an important migration stopover site. Yong and Finch (1997) suggested that the Middle Rio Grande provides important migration stopover habitat for Southwestern Willow Flycatchers to replenish energy stores. The Santa Fe River is close enough to the Rio Grande to share in that role, and the migrant flycatchers observed in 2005 and 2007 might have included the endangered Southwestern subspecies. Second, by maintaining or enhancing riparian vegetation at the Santa Fe River site, BLM has the opportunity to demonstrate successful riparian management through the establishment of a breeding Southwestern Willow Flycatcher population.

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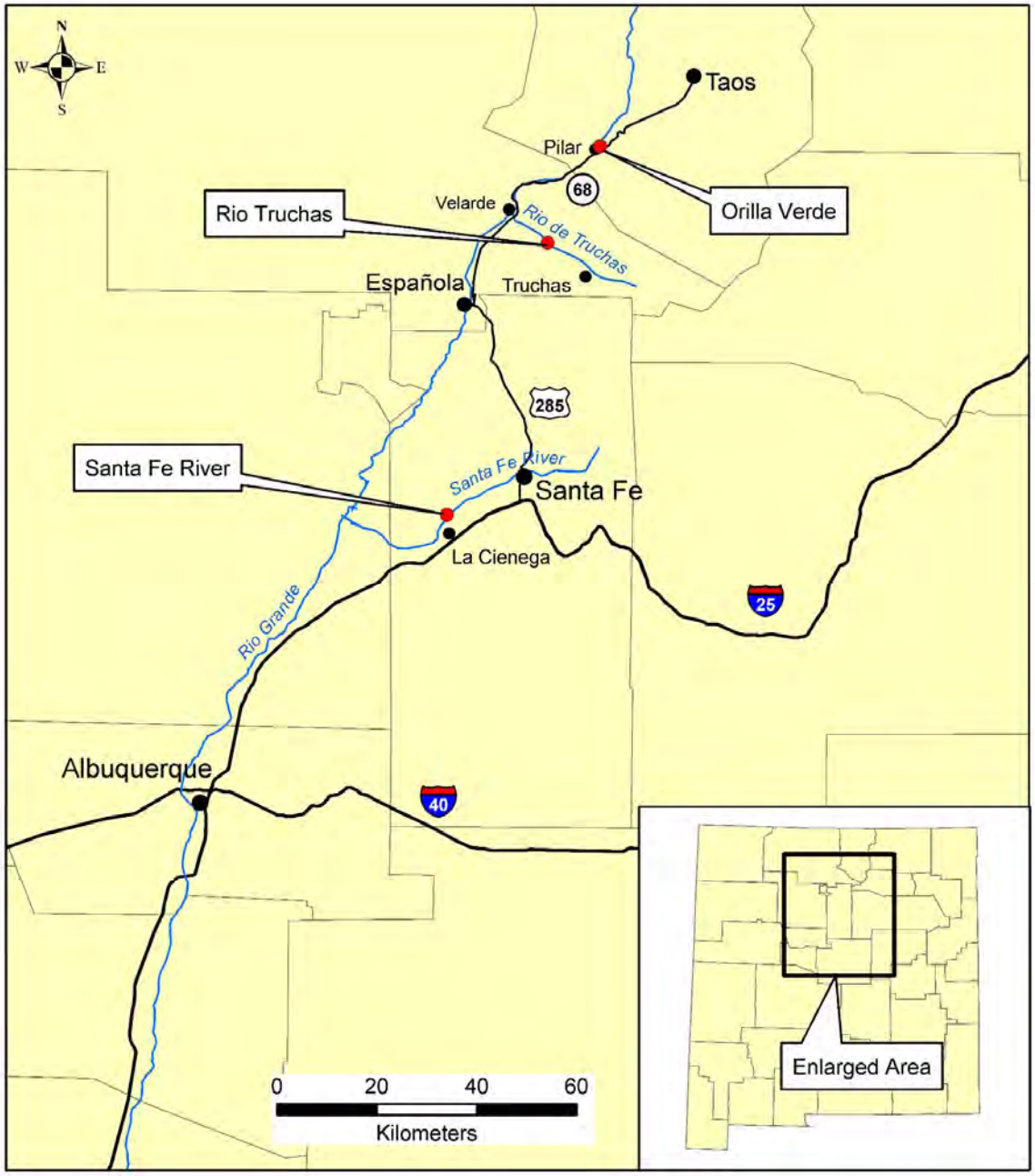

Figure 1. Location of sites where we conducted Willow Flycatcher surveys in the Bureau of Land Management's Taos, New Mexico, Resource Area in 2007: Orilla Verde, Rio Truchas, and Santa Fe River.

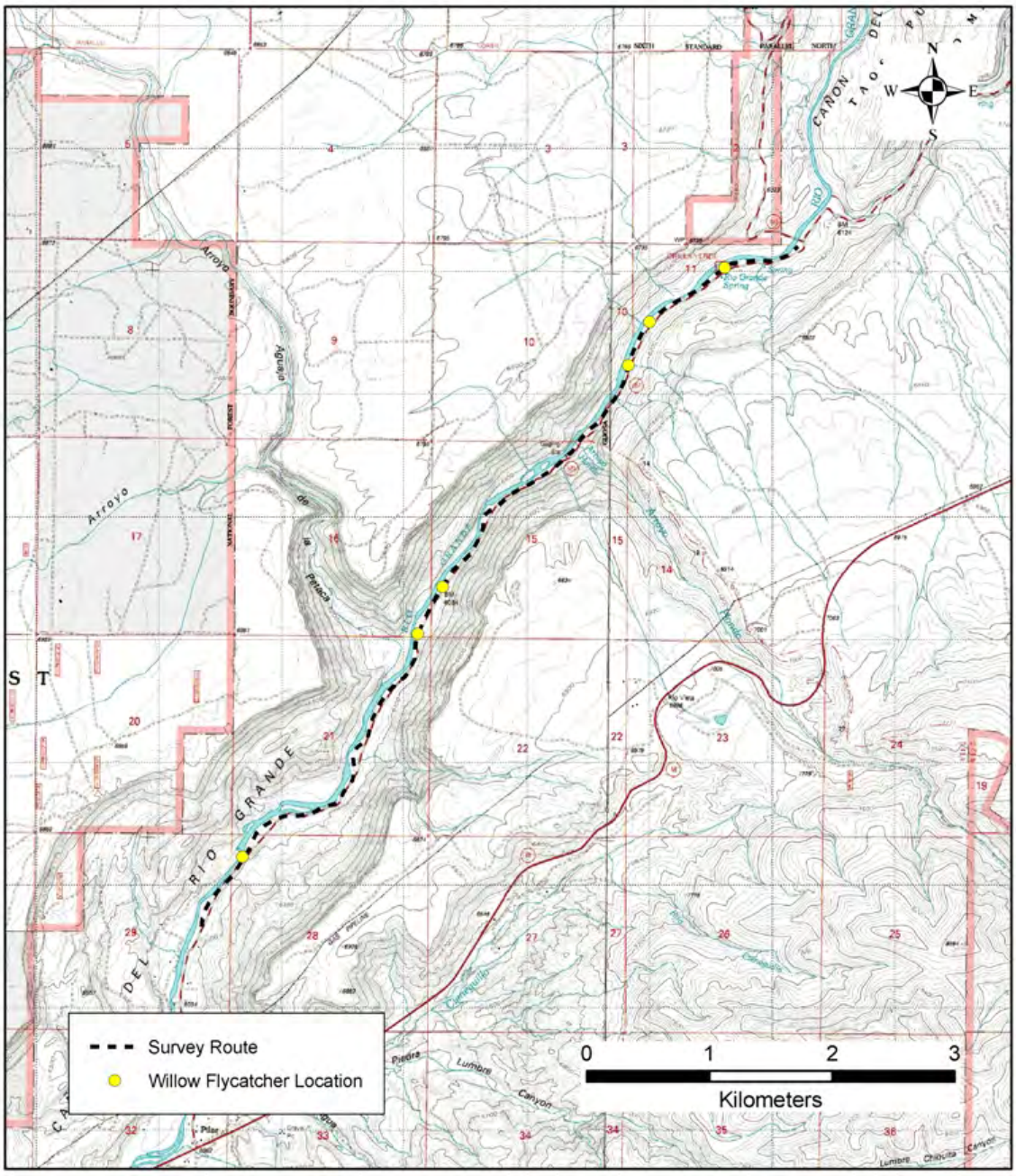

Figure 2. Willow Flycatcher survey route and 2007 Willow Flycatcher observations at Orilla Verde, Taos County, New Mexico. Survey route shown is an enlarged section of the Carson and Taos, New Mexico USGS Quad Maps.

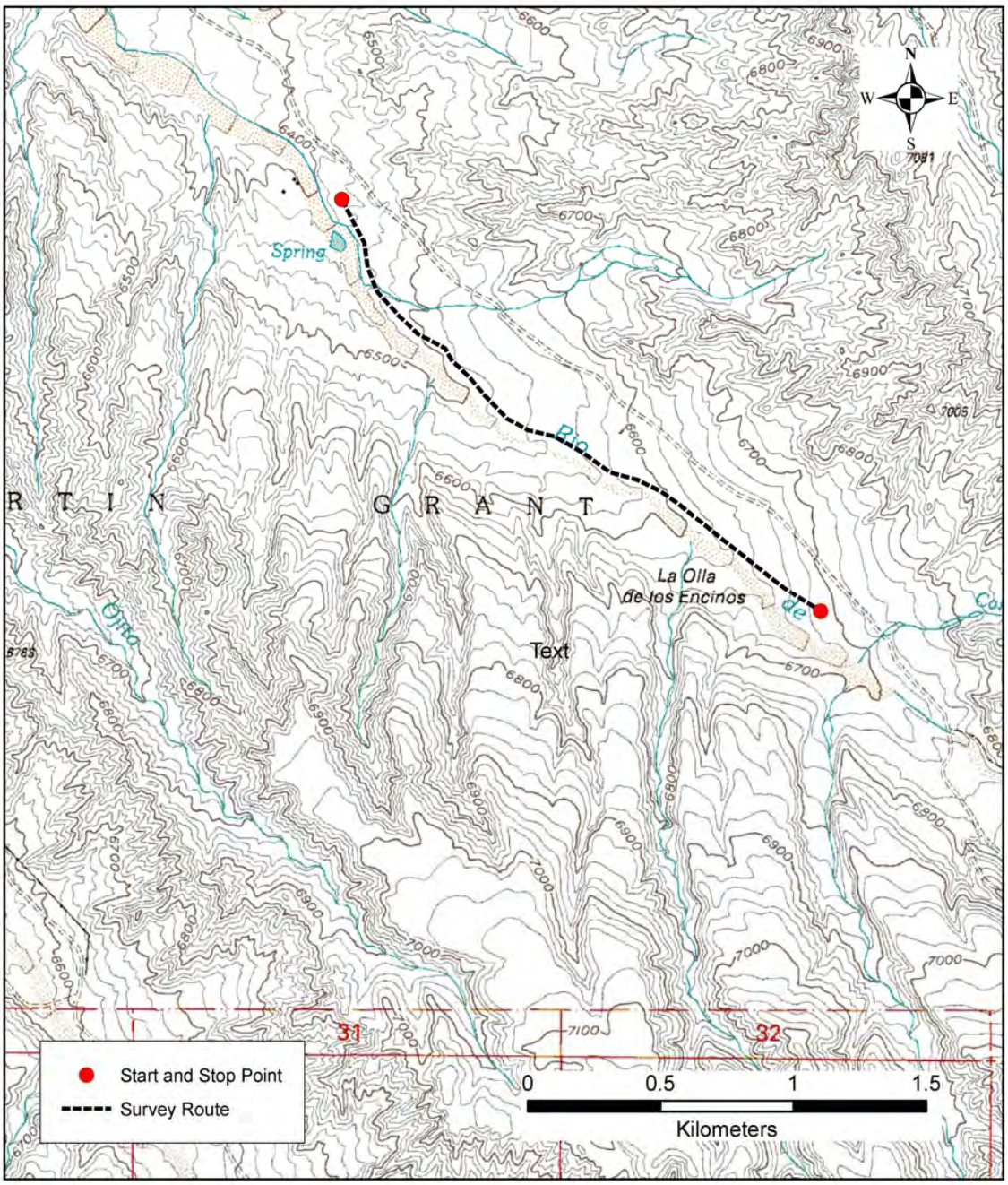

Figure 3. Willow Flycatcher survey route at Rio Truchas, Rio Arriba County, New Mexico. Survey route shown is an enlarged section of the Chimayo, New Mexico USGS Quad Map.

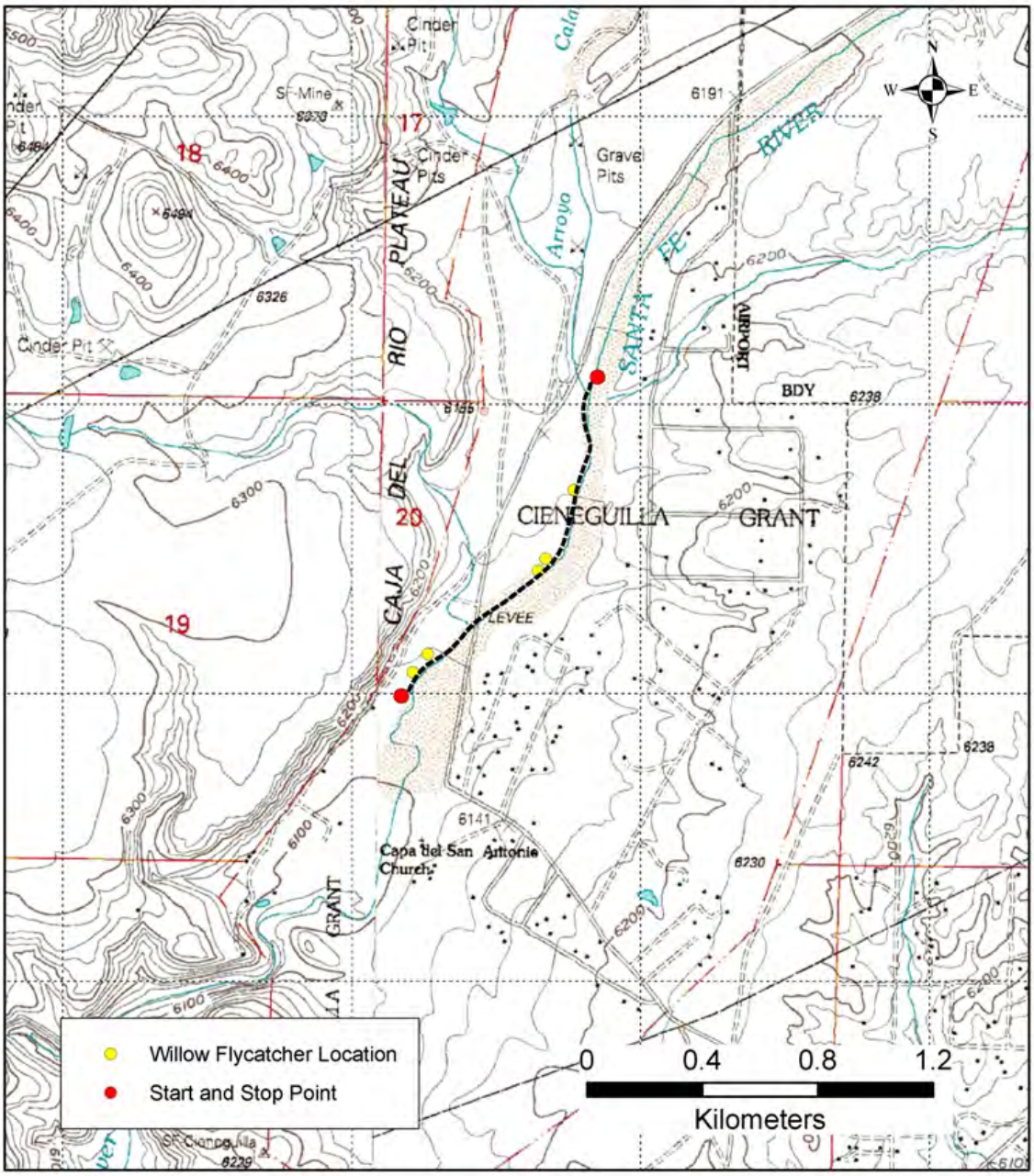

Figure 4. Willow Flycatcher survey route and 2007 Willow Flycatcher observations at Santa Fe River, Santa Fe County, New Mexico. Survey route shown is an enlarged section of the Turquoise Hill and Tetilla Peak, New Mexico USGS Quad Maps.

Appendix 1. List of 77 bird species observed during 2007 Willow Flycatcher surveys at Orilla Verde (OV), Rio Truchas (RT), and Santa Fe River (SF), New Mexico. Note that at Orilla Verde, a bird list was kept only during the first survey. Species are listed in taxonomic order, based on the American Birding Association, Checklist 6.7.

Common Name	Scientific Name	OV	RT	SF
Canada Goose	*Branta canadensis*	X	-	-
Wood Duck	*Aix sponsa*	X	-	-
Mallard	*Anas platyrhynchos*	X	-	X
Scaled Quail	*Callipepla squamata*	-	-	X
Black-crowned Night Heron	*Nycticorax nycticorax*	X	-	-
Turkey Vulture	*Cathartes aura*	-	X	-
Cooper's Hawk	*Accipiter cooperii*	-	X	-
American Kestrel	*Falco sparverius*	-	-	X
Peregrine Falcon	*Falco peregrinus*	X	-	-
Spotted Sandpiper	*Actitis macularia*	X	-	-
White-winged Dove	*Zenaida asiatica*	-	-	X
Mourning Dove	*Zenaida macroura*	X	X	X
Common Poorwill	*Phalaenoptilus nuttallii*	X	-	-
Black-chinned Hummingbird	*Archilochus alexandri*	-	X	X
Broad-tailed Hummingbird	*Selasphorus platycercus*	-	X	X
Belted Kingfisher	*Ceryle alcyon*	X	-	-
Northern Flicker	*Colaptes auratus*	-	X	X
Western Wood-Pewee	*Contopus sordidulus*	X	X	-
Willow Flycatcher	*Empidonax traillii*	X	-	X
Black Phoebe	*Sayornis nigricans*	-	-	X
Say's Phoebe	*Sayornis saya*	X	X	X
Ash-throated Flycatcher	*Myiarchus cinerascens*	X	X	X
Cassin's Kingbird	*Tyrannus vociferans*	-	X	-
Western Kingbird	*Tyrannus verticalis*	X	-	X
Plumbeous Vireo	*Vireo plumbeus*	X	X	-
Warbling Vireo	*Vireo gilvus*	X	-	-
Western Scrub-Jay	*Aphelocoma californica*	X	X	X
Pinyon Jay	*Gymnorhinus cyanocephalus*	X	-	-
American Crow	*Corvus brachyrhynchos*	X	-	-
Common Raven	*Corvus corax*	X	X	X
Tree Swallow	*Tachycineta bicolor*	X	-	-
Violet-green Swallow	*Tachycineta thalassina*	X	-	-
Northern Rough-winged Swallow	*Stelgidopteryx serripennis*	X	-	X
Barn Swallow	*Hirundo rustica*	X	-	X
Juniper Titmouse	*Baeolophus ridgwayi*	-	X	-

Common Name	Scientific Name	OV	RT	SF
Bushtit	*Psaltriparus minimus*	X	X	X
White-breasted Nuthatch	*Sitta carolinensis*	-	-	X
Rock Wren	*Salpinctes obsoletus*	X	-	X
Canyon Wren	*Catherpes mexicanus*	X	-	X
Bewick's Wren	*Thryomanes bewickii*	X	X	X
Marsh Wren	*Cistothorus palustris*	X	-	-
Ruby-crowned Kinglet	*Regulus calendula*	-	-	X
American Robin	*Turdus migratorius*	X	X	X
Northern Mockingbird	*Mimus polyglottos*	X	-	X
European Starling	*Sturnus vulgaris*	X	-	X
Virginia's Warbler	*Vermivora virginiae*	-	X	X
Yellow Warbler	*Dendroica petechia*	X	-	X
Yellow-rumped Warbler	*Dendroica coronata*	X	X	-
Common Yellowthroat	*Geothlypis trichas*	-	-	X
Yellow-breasted Chat	*Icteria virens*	X	X	X
Western Tanager	*Piranga ludoviciana*	X	-	X
Spotted Towhee	*Pipilo maculatus*	-	X	-
Canyon Towhee	*Pipilo fuscus*	X	X	-
Chipping Sparrow	*Spizella passerina*	-	X	X
Lark Sparrow	*Chondestes grammacus*	-	-	X
Song Sparrow	*Melospiza melodia*	-	X	-
Black-headed Grosbeak	*Pheucticus melanocephalus*	X	X	X
Blue Grosbeak	*Guiraca caerulea*	X	X	X
Lazuli Bunting	*Passerina amoena*	-	X	X
Red-winged Blackbird	*Agelaius phoeniceus*	X	-	X
Western Meadowlark	*Sturnella neglecta*	-	-	X
Brewer's Blackbird	*Euphagus cyanocephalus*	X	-	-
Brown-headed Cowbird	*Molothrus ater*	X	X	-
Bullock's Oriole	*Icterus bullockii*	X	-	X
House Finch	*Carpodacus mexicanus*	X	X	X
Lesser Goldfinch	*Carduelis psaltria*	-	X	-
American Goldfinch	*Carduelis tristis*	X	-	-

Appendix 2. Copies of data forms for 2007 Willow Flycatcher surveys at Orilla Verde, Rio Truchas, and Santa Fe River, New Mexico.

Willow Flycatcher Survey and Detection Form (revised April, 2004)

Site Name Orilla Verde Recreation Area State NM County Taos
USGS Quad Name Carson / Taos Elevation 1850 feet / (meters) (circle one)

Is copy of USGS map marked with survey area and WIFL sightings attached (as required)? ☒ *Yes* ☐ *No*

Site Coordinates: Start: N 4015681 E 429362 UTM Datum NAD 27 (NAD27 preferred)
Stop: N 4021157 E 434202 UTM Zone 13

**** Fill in additional site information on back of this page ****

Survey # / Observer(s) (Full Name)	Date (m/d/y) Survey time	Number of Adult WIFLs	Estimated Number of Pairs	Estimated Number of Territories	Nest(s) Found? Y or N	Cowbirds Detected? Y or N	Presence of Livestock, Recent sign, If Yes, Describe Y or N	Comments about this survey (e.g., bird behavior, evidence of pairs or breeding, number of nests, nest contents or number of fledges seen; potential threats)
1 Sandra Skeba, Devin Bosler	Date 5/22/07 Start 0600 Stop 0945 Total hrs 7:30	2	0-2	0-2	N	Y	N	One bird west of river in short willows. Another bird actively singing and calling from a large salt cedar and short willow.
2 Karen Epperson	Date 5/30/07 5/31/07 Start 0500 0500 Stop 0800 0800 Total hrs 6:00	1	0-1	0-1	N	Y	N	This is an extra survey for the first period.
3 Karen Epperson	Date 6/4/07 6/5/07 Start 0615 0615 Stop 0830 0845 Total hrs 4:45	2	0-2	0-2	N	Y	N	
4 Karen Epperson	Date 6/11/07 6/12/07 Start 0515 0500 Stop 0815 0745 Total hrs 5:45	1	0-1	0-1	N	Y	N	This is an extra survey for the second period.
5 Karen Epperson	Date 6/21/07 6/22/07 Start 0500 0500 Stop 0745 0730 Total hrs 5:15	0	0	0	N	Y	N	First visit in 3rd Survey period. See next page for remaining visits.

Overall Site Summary (Total resident WIFLs only) → Total survey hrs	Adults	Pairs	Territories	Nests	Were any WIFLs color-banded? Yes No. If yes, report color combination(s) in the comments section on back of form

Reporting Individual Gail Garber Date Report Completed 7/17/07
US Fish and Wildlife Service Permit # TE835139-1 AZ Game and Fish Department (or other state) Permit #

Submit original form by August 1st. Retain a copy for your records.

Willow Flycatcher Survey and Detection Form (revised April, 2004)

Site Name Orilla Verde Recreation Area State NM County Taos
USGS Quad Name Carson / Taos Elevation 1850 feet / (meters) (circle one)

Is copy of USGS map marked with survey area and WIFL sightings attached (as required)? ☒ *Yes* ☐ *No*

Site Coordinates: Start: N 4015681 E 429362 UTM Datum NAD 27 (NAD27 preferred)
Stop: N 4021157 E 434202 UTM Zone 13

*** Fill in additional site information on back of this page ***

Survey # / Observer(s) (Full Name)	Date (m/d/y) Survey time	Number of Adult WIFLs	Estimated Number of Pairs	Estimated Number of Territories	Nest(s) Found? Y or N	Cowbirds Detected? Y or N	Presence of Livestock, Recent sign, If Yes, Describe Y or N	Comments about this survey (e.g., bird behavior, evidence of pairs or breeding, number of nests, nest contents or number of fledges seen; potential threats)
1 Karen Epperson	Date 6/28/07 6/29/07 Start 0515 0500 Stop 0730 0715 Total hrs 4:30	0	0	0	N	Y	N	Second visit in 3rd survey period.
2 Karen Epperson	Date 7/4/07 7/5/07 Start 0515 0515 Stop 0715 0730 Total hrs 4:15	0	0	0	N	Y	N	Third survey in 3rd survey period.
3	Date Start Stop Total hrs							
4	Date Start Stop Total hrs							
5	Date Start Stop Total hrs							

Overall Site Summary (Total resident WIFLs only)	Adults	Pairs	Territories	Nests	Were any WIFLs color-banded? Yes (No)
Total survey hrs 38:00	0	0	0	0	If yes, report color combination(s) in the comments section on back of form

Reporting Individual Gail Garber Date Report Completed 7/17/07
US Fish and Wildlife Service Permit # TE835139-1 AZ Game and Fish Department (or other state) Permit # _____

Submit original form by August 1st. Retain a copy for your records.

Fill in the following information completely. Submit original form by August 1st. Retain a copy for your records.

Reporting Individual Gail Garber Phone # (505) 828-9455
Affiliation Hawks Aloft, Inc. E-mail gail@hawksaloft.org
Site Name Orilla Verde Recreation Area Date Report Completed 7/17/07

Did you verify that this site name is consistent with that used in previous years? (Yes) / No (circle one)
If name is different, what name(s) was used in the past? _____
If site was surveyed last year, did you survey the same general area this year? (Yes) / No If no, summarize in comments below.
Did you survey the same general area during each visit to this site this year? (Yes) / No If no, summarize in comments below.

Management Authority for Survey Area (circle one): (Federal) Municipal/County State Tribal Private
Name of Management Entity or Owner (e.g., Tonto National Forest) Bureau of Land Management

Length of area surveyed: 7.0 km (specify units, e.g., miles = mi, kilometers = km, meters = m)

Vegetation Characteristics: Overall, are the species in tree/shrub layer at this site comprised predominantly of (check one):

☐ Native broadleaf plants (entirely or almost entirely, includes high-elevation willow)

☒ Mixed native and exotic plants (mostly native)

☐ Mixed native and exotic plants (mostly exotic)

☐ Exotic/introduced plants (entirely or almost entirely)

Identify the 2-3 predominant tree/shrub species: Willow, Salt Cedar, New Mexico Olive

Average height of canopy (Do not put a range): 4 m (specify units)

Was surface water or saturated soil present at or adjacent to site? (Yes) / No (circle one)
Distance from the site to surface water or saturated soil: 5-10 m (specify units)

Did hydrological conditions change significantly among visits (did the site flood or dry out)? Yes (No) (circle one)
If yes, describe in comments section below.

Remember to attach a copy of a USGS quad/topographical map (REQUIRED) of the survey area, outlining the survey site and location of WIFL detections. Also include a sketch or aerial photograph showing details of site location, patch shape, survey route in relation to patch, and location of any willow flycatchers or willow flycatcher nests detected. Such sketches or photographs are welcomed, but DO NOT substitute for the required USGS quad map. Please include photos of the interior of the patch, exterior of the patch, and overall site and describe any unique habitat features.

Comments (attach additional sheets if necessary)

WIFL Detection Locations: 6

Date Detected	N UTM	E UTM	Date Detected	N UTM	E UTM
5/22/07	4016234	429687	6/5/07	4020241	432832
5/22/07	4021035	433620	6/11/07	4018053	431116
5/31/07	4020593	433008			
6/4/07	4018434	431318			

Willow Flycatcher Survey and Detection Form (revised April, 2004)

Site Name Rio Truchas State NM County Rio Arriba
USGS Quad Name Chimayo Elevation 2010 feet / (meters) (circle one)

Is copy of USGS map marked with survey area and WIFL sightings attached (as required)? ☒ *Yes* ☐ *No*

Site Coordinates: Start: N 3995700 E 419000 UTM Datum NAD 27 (NAD27 preferred)
Stop: N 3997250 E 417200 UTM Zone 13

***** Fill in additional site information on back of this page *****

Survey # / Observer(s) (Full Name)	Date (m/d/y) Survey time	Number of Adult WIFLs	Estimated Number of Pairs	Estimated Number of Territories	Nest(s) Found? Y or N	Cowbirds Detected? Y or N	Presence of Livestock, Recent sign, If Yes, Describe Y or N	Comments about this survey (e.g., bird behavior, evidence of pairs or breeding, number of nests, nest contents or number of fledges seen; potential threats)
1 Sandra Skeba, Allison Schact	Date 5/17/07 Start 0615 Stop 0900 Total hrs 2:45	0	0	0	N	Y	N	
2 Sandra Skeba, Allison Schact	Date 6/15/07 Start 0620 Stop 0930 Total hrs 3:10	0	0	0	N	Y	N	
3 Sandra Skeba, Allison Schact	Date 6/29/07 Start 0600 Stop 0920 Total hrs 3:20	0	0	0	N	Y	N	
4	Date / Start / Stop / Total hrs							
5	Date / Start / Stop / Total hrs							

Overall Site Summary (Total resident WIFLs only)	Adults	Pairs	Territories	Nests	Were any WIFLs color-banded? Yes (No)
Total survey hrs 9:15	0	0	0	0	If yes, report color combination(s) in the comments section on back of form

Reporting Individual Gail Garber Date Report Completed 7/17/07
US Fish and Wildlife Service Permit # TE835139-1 AZ Game and Fish Department (or other state) Permit # _____

Submit original form by August 1st. Retain a copy for your records.

Fill in the following information completely. Submit original form by August 1st. Retain a copy for your records.

Reporting Individual Gail Garber Phone # (505) 828-9455
Affiliation Hawks Aloft, Inc. E-mail gail@hawksaloft.org
Site Name Rio Truchas Date Report Completed 7/17/07

Did you verify that this site name is consistent with that used in previous years? (Yes) / No (circle one)
If name is different, what name(s) was used in the past? _____
If site was surveyed last year, did you survey the same general area this year? (Yes) / No If no, summarize in comments below.
Did you survey the same general area during each visit to this site this year? (Yes) / No If no, summarize in comments below.

Management Authority for Survey Area (circle one): (Federal) Municipal/County State Tribal Private
Name of Management Entity or Owner (e.g., Tonto National Forest) Bureau of Land Management

Length of area surveyed: 2.5 km (specify units, e.g., miles = mi, kilometers = km, meters = m)

Vegetation Characteristics: Overall, are the species in tree/shrub layer at this site comprised predominantly of (check one):

☐ Native broadleaf plants (entirely or almost entirely, includes high-elevation willow)

☒ Mixed native and exotic plants (mostly native)

☐ Mixed native and exotic plants (mostly exotic)

☐ Exotic/introduced plants (entirely or almost entirely)

Identify the 2-3 predominant tree/shrub species: Cottonwood, Willow, Russian Olive

Average height of canopy (Do not put a range): 5 m (specify units)

Was surface water or saturated soil present at or adjacent to site? (Yes) / No (circle one)
Distance from the site to surface water or saturated soil: 0-10 m (specify units)

Did hydrological conditions change significantly among visits (did the site flood or dry out)? Yes (No) (circle one)
If yes, describe in comments section below.

Remember to attach a copy of a USGS quad/topographical map (REQUIRED) of the survey area, outlining the survey site and location of WIFL detections. Also include a sketch or aerial photograph showing details of site location, patch shape, survey route in relation to patch, and location of any willow flycatchers or willow flycatcher nests detected. Such sketches or photographs are welcomed, but DO NOT substitute for the required USGS quad map. Please include photos of the interior of the patch, exterior of the patch, and overall site and describe any unique habitat features.

Comments (attach additional sheets if necessary)

WIFL Detection Locations: 0

Date Detected	N UTM	E UTM	Date Detected	N UTM	E UTM

Willow Flycatcher Survey and Detection Form (revised April, 2004)

Site Name Santa Fe River – La Cienega State NM County Santa Fe
USGS Quad Name Turquoise Hill Elevation Unknown feet / meters (circle one)

Is copy of USGS map marked with survey area and WIFL sightings attached (as required)? ☒ *Yes* ☐ *No*

Site Coordinates: Start: N 3941100 E 398856 UTM Datum NAD 27 (NAD27 preferred)
Stop: N 3939994 E 398176 UTM Zone 13

***** Fill in additional site information on back of this page *****

Survey # / Observer(s) (Full Name)	Date (m/d/y) Survey time	Number of Adult WIFLs	Estimated Number of Pairs	Estimated Number of Territories	Nest(s) Found? Y or N	Cowbirds Detected? Y or N	Presence of Livestock, Recent sign, If Yes, Describe Y or N	Comments about this survey (e.g., bird behavior, evidence of pairs or breeding, number of nests, nest contents or number of fledges seen; potential threats)
1 Jennifer Lisignoli	Date 5/22/07 Start 0600 Stop 0930 Total hrs 3:30	5	0-5	0-5	N	N	N	The five detection represented at least four different individuals
2 Jennifer Lisignoli	Date 6/17/07 Start 0603 Stop 0853 Total hrs 2:50	0	0	0	N	Y	N	
3 Jennifer Lisignoli	Date 6/24/07 Start 0600 Stop 0816 Total hrs 2:16	0	0	0	N	N	N	
4 Jennifer Lisignoli, Jennifer Redman	Date 6/29/07 Start 0600 Stop 0800 Total hrs 2:00	0	0	0	N	Y	N	
5 Jennifer Lisignoli	Date 7/8/07 Start 0612 Stop 0820 Total hrs 2:08	0	0	0	N	Y	N	

Overall Site Summary (Total **resident** WIFLs only) Total survey hrs 12:44	Adults	Pairs	Territories	Nests	Were any WIFLs color-banded? Yes (No) If yes, report color combination(s) in the comments section on back of form
	0	0	0	0	

Reporting Individual Gail Garber Date Report Completed 8/8/07
US Fish and Wildlife Service Permit # TE835139-1 AZ Game and Fish Department (or other state) Permit #

Submit original form by August 1st. Retain a copy for your records.

Fill in the following information completely. Submit original form by August 1st. Retain a copy for your records.

Reporting Individual Gail Garber Phone # (505) 828-9455
Affiliation Hawks Aloft, Inc. E-mail gail@hawksaloft.org
Site Name Santa Fe River – La Cienega Date Report Completed 8/8/07

Did you verify that this site name is consistent with that used in previous years? (Yes) No (circle one)
If name is different, what name(s) was used in the past? _____
If site was surveyed last year, did you survey the same general area this year? (Yes)/ No If no, summarize in comments below.
Did you survey the same general area during each visit to this site this year? (Yes)/ No If no, summarize in comments below.

Management Authority for Survey Area (circle one): (Federal) Municipal/County State Tribal Private
Name of Management Entity or Owner (e.g., Tonto National Forest) Bureau of Land Management

Length of area surveyed: 1.5 km (specify units, e.g., miles = mi, kilometers = km, meters = m)

Vegetation Characteristics: Overall, are the species in tree/shrub layer at this site comprised predominantly of (check one):

☐ Native broadleaf plants (entirely or almost entirely, includes high-elevation willow)

☒ Mixed native and exotic plants (mostly native)

☐ Mixed native and exotic plants (mostly exotic)

☐ Exotic/introduced plants (entirely or almost entirely)

Identify the 2-3 predominant tree/shrub species: Russian Olive, Willow, Salt Cedar

Average height of canopy (Do not put a range): 4 m (specify units)

Was surface water or saturated soil present at or adjacent to site? (Yes)/ No (circle one)
Distance from the site to surface water or saturated soil: 0-5 m (specify units)

Did hydrological conditions change significantly among visits (did the site flood or dry out)? Yes (No) (circle one)
If yes, describe in comments section below.

Remember to attach a copy of a USGS quad/topographical map (REQUIRED) of the survey area, outlining the survey site and location of WIFL detections. Also include a sketch or aerial photograph showing details of site location, patch shape, survey route in relation to patch, and location of any willow flycatchers or willow flycatcher nests detected. Such sketches or photographs are welcomed, but DO NOT substitute for the required USGS quad map. Please include photos of the interior of the patch, exterior of the patch, and overall site and describe any unique habitat features.

Comments (attach additional sheets if necessary)
The flycatcher detected at 398268-3940139 might have been the same individual detected at 398217-3940076.

WIFL Detection Locations: 5

Date Detected	N UTM	E UTM	Date Detected	N UTM	E UTM
5/22/07	3940709	398774	5/22/07	3940076	398217
5/22/07	3940470	398676			
5/22/07	3940429	398650			
5/22/07	3940139	398268			